

UNUSUAL CHOREIFORM ALTERATIONS IN THE WIDTH OF
THE PALPEBRAL FISSURE OF BOTH EYES, OCCA-
SIONED BY SPASM OF THE LEVATOR
PALPEBRAE MUSCLES.*

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In October last, O. W., a colored boy, eight years of age, was brought to my service at the Howard Hospital, on account of a curious tendency to raise his upper lids. His mother attributed these movements to an accident which he had received during the summer months, in which the back of his head had been run over by a wagon, for she said that prior to this the boy had never been troubled with his eyes nor had she noticed anything unusual about them. At the time of examination he complained somewhat of headache but especially of a feeling of sand in his eyes.

The movements of the eyelids were very curious and striking, owing to the alterations in the width of the palpebral fissure which they occasioned and the amount of sclera which became exposed, the negro skin contrasting vividly with the pearly white of the sclera. The contractions were clonic and rythmical, the fissures widening about fifteen to twenty times in the minute; they were entirely under the control of the will, the patient being able to initiate them or to cause them to cease when commanded to do so. The excursions of both eyes were normal; there was no nystagmus; vision and accommodation were normal; both eyes were moderately hypermetropic.

It was easily apparent that the widening of the fissure was occasioned by a contraction of the levators of the lids, and that this was accomplished without the assistance of the frontalis, the eyebrows remaining perfectly quiescent: it was further patent that the movements had no connection with the act of winking, as the contraction of the orbicularis occurred in the

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usual way, entirely independent of the widening of the fissure. The question then arose, which part of the levator was acting, the bulk of the muscle, that controlled by the third nerve, or the smaller portion, consisting of unstriped fibers, which is innervated by the sympathetic. It seemed probable that it was the contraction of the former that occasioned the widening, for it was thought that if it were due to a spasm of the muscle of Müller, changes in the size of the pupil, the iris being likewise under the control of the sympathetic, would probably have been observed also, whereas the pupils, which were 3 mm. in size, remained unchanged during the dilatation movements. It is of interest to note in this connection that the Graefe lid sign was absent and that there was no exophthalmos.

The pathogenesis of the affection was assumed to be choreiform, the contraction of the levator replacing the contraction of the orbicularis, which is so common a manifestation of habit chorea. As is so often the case in chorea of the lids, there were no associated twitchings in the muscles of the face, neck or elsewhere. Spasm of the levator is a very rare affection, and notwithstanding the many and bizarre forms of tremor and spasm of ocular and associated muscles of the face and neck which have been recorded in chorea, its occurrence in connection with this disease has not been remarked before. An instance of primary tonic cramp in an insane patient has been recorded by Pick, in which the Graefe lid sign was present, although there were no signs of exophthalmic goiter: in most of the recorded cases of spasm of this muscle, however, there have been other associated ocular conditions. Thus Wilbrand and Saenger in their recent and comprehensive work upon the neurology of the eye, mention in this connection cases of Salzmann and Rampoldi, where there were rythmical changes in the width of the palpebral fissure synchronous with pupillary contraction. The same authors report cases seen by Hutchinson and Gooding where the spasm of the levator was induced reflexly by diseased teeth. Finally, they give the notes of a series of cases where the spasm was probably due to irritation of the nuclear region of the oculomotor, being associated with paresis of groups of muscles supplied by this center.

Although under ordinary conditions the action of the levator in raising the lid is inseparable from a contraction of the frontalis, it is possible by practise to innervate the levator alone, and to widen the fissure without bringing the frontalis into play. I have seen this isolated action of the levator, though but to a slight degree, in several patients with chronic conjunctival irritation, where the movements of the lid seemed to bring momentary relief to the local sensations, and I have repeatedly noticed the fissures widen independent of any action of the frontalis when patients fixed the finger in the cover test at the near point; the widening in the latter instance being attributable to an associated stimulation of both internal rectus and levator muscles.

The course and conduct of the case were simple, the movements in the lids disappearing as soon as atropine was instilled for refraction purposes, and no return of them has been noticed since the proper glasses were worn.